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Differences in treatment satisfaction between children and adolescents in in-patient psychiatry – development of an assessment instrument for children and some comparative results.

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Background

Instruments to assess satisfaction of children with their in-patient treatment are scarce. The **B**road **E**valuation of **S**atisfaction with **T**reatment (BEST) questionnaires have been developed in three versions: for children, adolescents, and parents. The psychometric properties in adolescents and parents are published in Keller et al. (2021).

Concerning factorial structure in the version for adolescents, three factors emerged:

1) Therapeutic relationship
2) Environment
3) General satisfaction and treatment success

The same three factors could be distinguished in the parent's version.

For children, exploratory factor analyses with an earlier version of the questionnaire revealed two or three correlated factors, and results were indecisive.

Objective:

a) Examining psychometric properties and factorial structure of an instrument assessing treatment satisfaction in children, and

b) evaluate potential differences to adolescents' ratings

Method

Samples: We analysed 848 children's questionnaires, assessed in seven hospitals across Southern Germany. Mean age of children was 10.55 years (SD = 2.33) and 33.1% were female. For adolescents, 1582 questionnaires were available, and mean age was 15.0 years (SD = 1.65), 62.4% female.

Questionnaire: Ratings in the BEST are assessed on a 5-point Likert scale. In the version for children, smilies and specific category texts are provided (see example below). In the adolescent's version, numbers are shown with 1=„completely disagree" to 5=„completely agree". In both forms, a high number means high satisfaction.

Statistical Analysis: Exploratory and confirmatory factor analyses with the WLSMV estimator with M*plus* v7.4 (Muthén & Muthén).

Results

a) Exploratory Factor Analyses favour 3 or 4 factors, but only the first two factors are well interpretable.

b) FA with a „random intercept", i.e. if person-specific levels are taken into account, show no clear improvement in fit (although they are expected to do so, c.f. Schmalbach et al., 2020, *Europ J Psych Ass*).

c) A bifactor-model with a general factor „satisfaction" and two specific factors („therapeutic relationship" and „environment") fits better than a 2-factorial solution.

d) Bifactor-(S-1)-Models (c.f. Eid et al., 2017, *Psych Meth)*, do not substantially change the factor composition and loadings.

e) Satisfaction ratings in comparable items show that children are generally fairly satisfied. Furthermore, children are significantly more satisfied than adolescents, especially as to aspects of the environment. Effect sizes are mostly in the medium range.

f) Childrens' and adolescents' ratings were alike as to „information about coercive measures" and „would come back"; both items scored in the medium satisfaction range.

Table 1: Goodness of fit-indices for factor analyses (FA) with the WLSMV estimator for children (*n* = 848).

Model	*chi*^{2}	*df*	CFI	TLI	RMSEA
Exploratory FA					
1 factor	988.1	170	.885	.872	.075
2 factors	439.9	151	.960	.949	.048
2 factors with RI	434.8	150	.960	.949	.047
3 factors	321.4	133	.974	.962	.041
3 factors with RI	314.0	132	.975	.963	.040
4 factors	244.5	116	.982	.971	.036
Confirmatory FA					
1 factor	988.1	170	.885	.872	.075
1 factor w/ residuals[a]	755.6	165	.917	.905	.065
2 correlated factors[b]	580.1	169	.942	.935	.054
Bifactor model[c]	434.2	153	.961	.951	.047

Note: RI = random intercept;
[a] model was estimated with five residual correlations, namely item pairs 1 and 2, 1 and 20, 9 and 10, 12 and 13, and item pair 17 and 18.
[b] factors "Therapeutic Relationship" and "Environment"; r_{12} = .73
[c] General factor and two specific factors

Discussion

BEST-C can be considered as a reliable instrument for treatment satisfaction. Factor models revealed quite consistently that a bifactor-model with a **general factor "satisfaction"** and two specific factors is favorable. Thus, children differentiate between aspects of **environment** and **relation to therapist**, as do adolescents (c.f. Keller et al., 2021).

High mean values in children may reflect a generally higher satisfaction than in adolescents. For children, therapeutic and caregiver relationships might be more important. The higher ratings in environment might reflect differences to child patients' everyday lives compared to adolescents'.

Limitations: Social desirability and a higher number of day patients (who are mostly offered a newer, more familiar and better equipped environment) as well as slightly different formulations of questions might interfere.

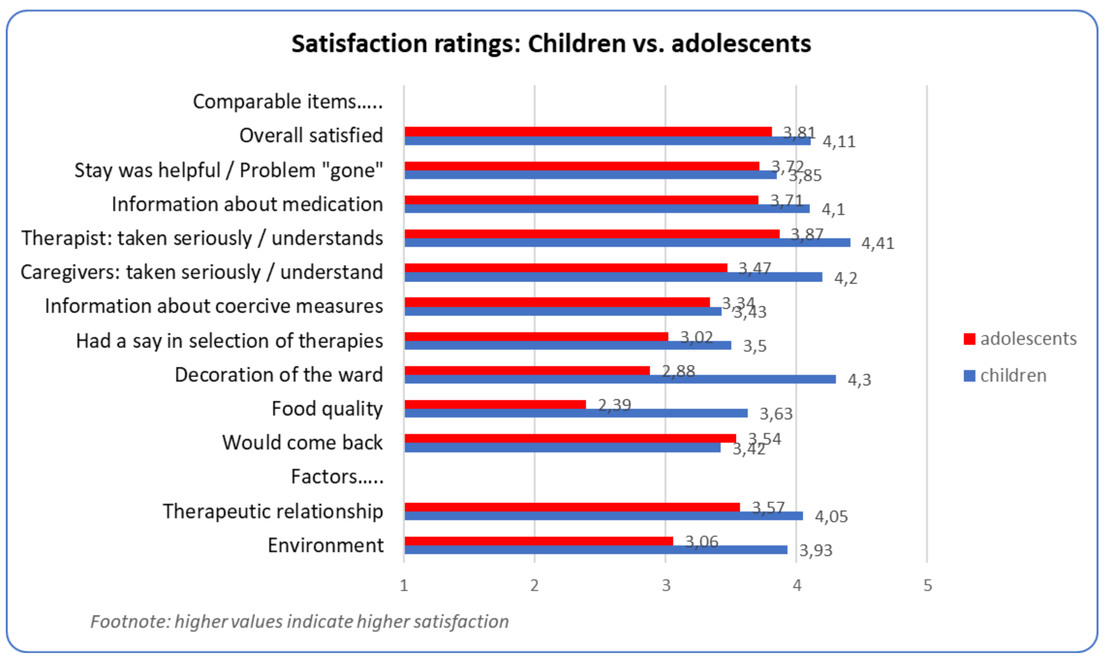

Fig. 1: Comparison of childrens' and adolescents' ratings in selected items and the 2 factors

References

Keller F, Naumann A & Fegert JM (2021). Satisfaction with in-patient child and adolescent psychiatric treatment: development and psychometric properties of the BEST questionnaires for adolescents and for parents. Child Adolesc Psychiatry Ment Health 15, 46.

Further material for the BEST (in German)

https://www.uniklinik-ulm.de/kinder-und-jugendpsychiatriepsychotherapie/team/prof-dr-f-keller.html#a24332

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